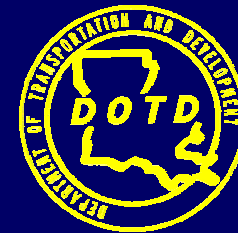


Huey P. Long Bridge Widening



Prepared by:
Modjeski and Masters, Inc.
New Orleans, LA

Objectives

- To increase traffic capacity
- To improve traffic efficiency
- To improve safety

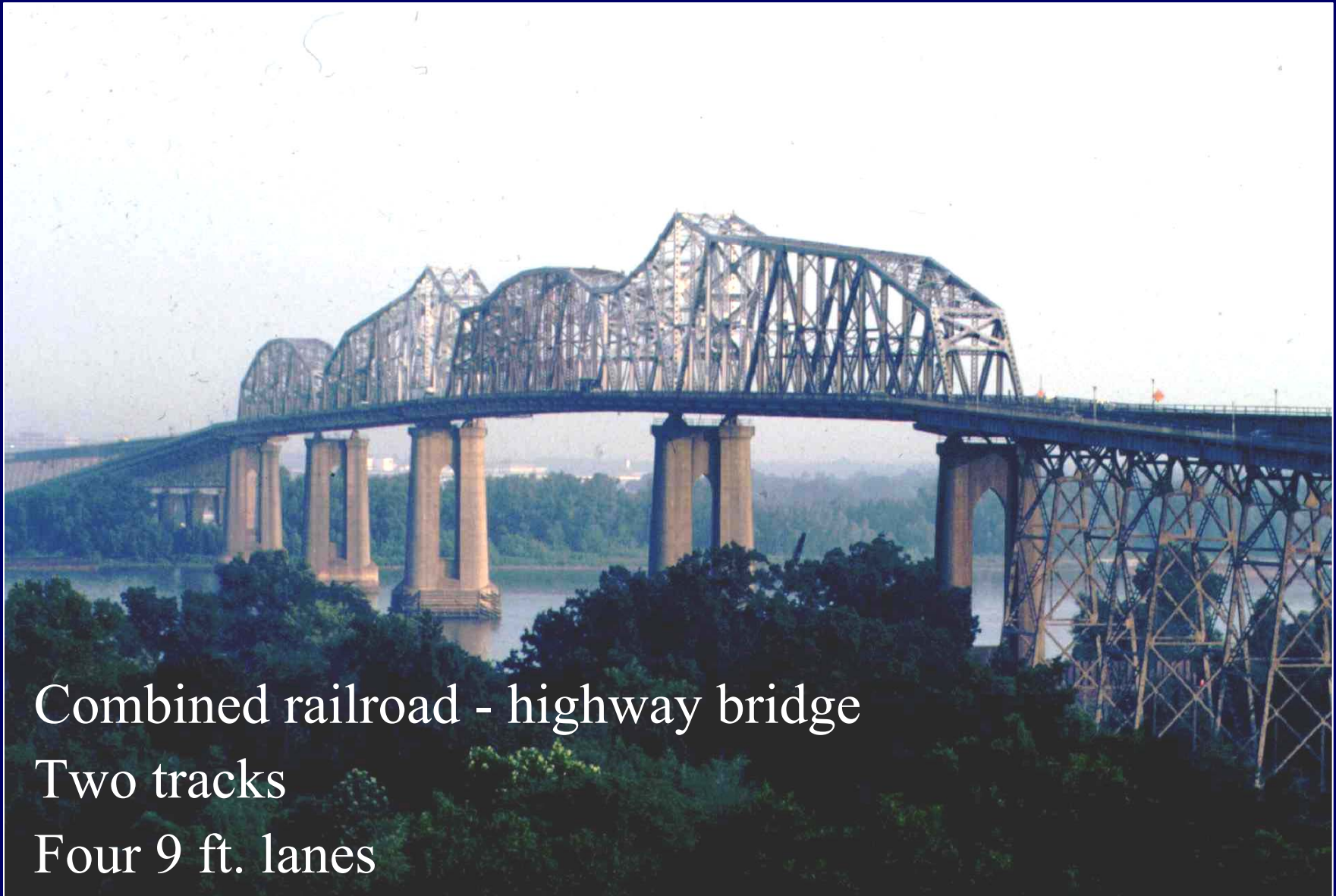
How Is It Being Done?

- By widening bridge roadways from 2 to 3 lanes
- By grade separating interchanges on each side of river
- By widening and reconstructing approach roadways

What Will Be The Results?

- Theoretical river crossing traffic capacity will double
- Traffic flows to and from the bridge will be improved
- Traffic flow at ground level – Bridge City Avenue and Jefferson Highway will be improved
- Safety will be enhanced

Background – Huey P. Long Bridge

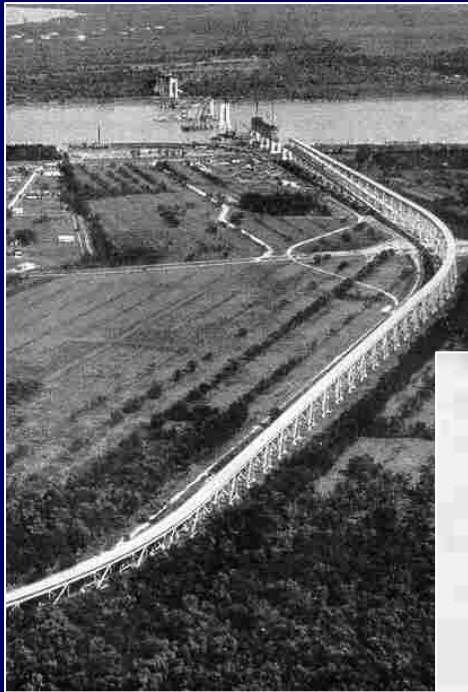


Combined railroad - highway bridge

Two tracks

Four 9 ft. lanes

Background



Completed in December 1935, the bridge is one of the longest railroad bridges in the world.

Background



- Very heavily built
- Carries largest modern RR load without distress
- Many years of service life remaining

Project Background – Various Studies

1982

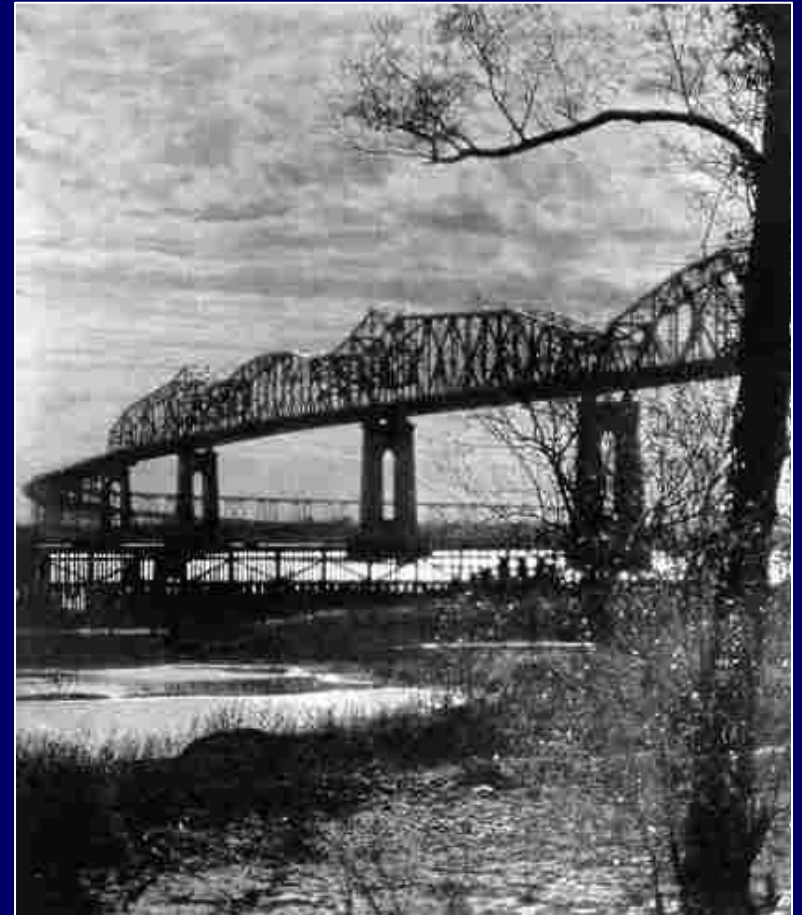
- Study of new bridge in this corridor
- Five alternatives considered
- High cost and large amount of right-of-way required
- Project was dropped

Project Background - 1986

- November 1986, LADOTD authorized M&M to perform conceptual studies of widening alternatives for the existing bridge
- Widening alternatives studied were:
 - Cantilever Widening
 - Parallel Truss Widening
 - Cable Stayed Widening
- 24, 28, 34, and 40 feet widenings were investigated

Project Background - 1988

- By widening the existing structure rather than constructing a new river crossing:
 - Reduce environmental impact, property takings.
 - Reduce construction cost.
 - Reuse existing right-of-way and traffic corridors.
- Final report published April 1988



Project Background - 1990

- October 1990, Geotechnical Investigation was completed by Eustis Engineering
- The findings from this report and other discussions determined that the existing caissons could support the increased load



Background

1992 - 1996

- Preliminary design – main bridge
- Line and grade - approaches
- Fatigue evaluation

1999 - 2000

- Investigation of 43 ft. widening
- Environmental process begun

Background

2000

- Public Meeting held

2001 - Present

- Final design – main bridge
- Environmental processing
- Additional line and grade - approaches

NEW WIDENING

EXISTING BRIDGE

NEW WIDENING

50'-6"

43' ROADWAY WIDTH

33'

43' ROADWAY WIDTH

C BRIDGE

H.W. ELEV. = 18.0

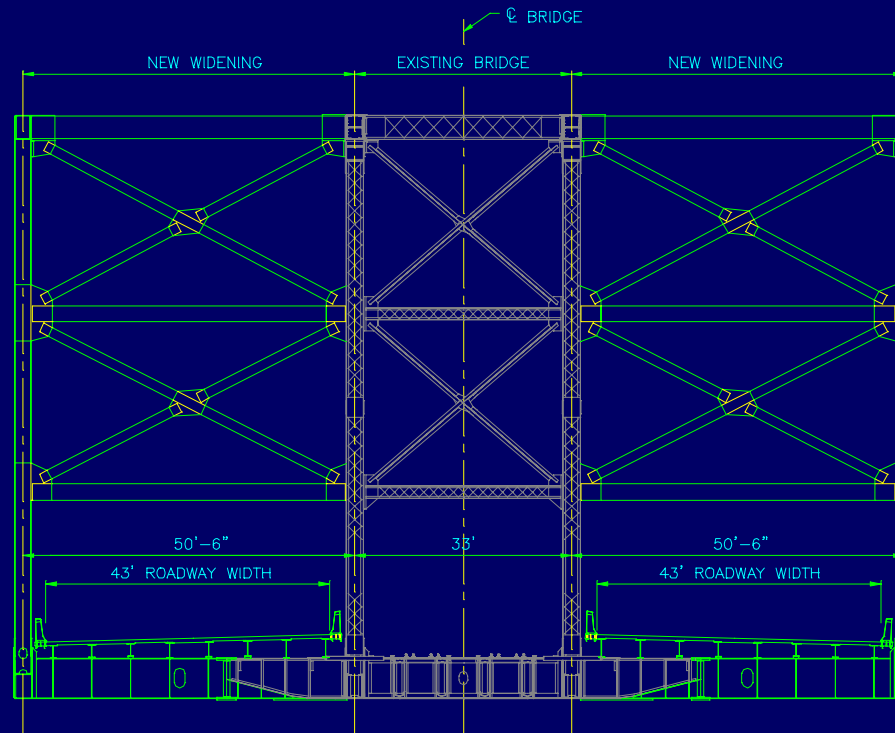
L.W. ELEV. = 0.0

TOP OF PIEDestal

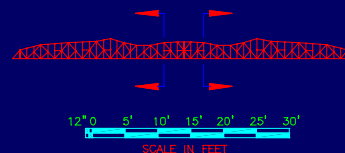
CROSS SECTION OF WIDENED BRIDGE AT PIER

1" = 10'

Cross Section – Widened Bridge Near Mid Span



CROSS SECTION OF WIDENED
BRIDGE NEAR MID-SPAN



Huey P. Long Bridge Widening



Main Bridge - Features

- Pier Foundations not modified.
- Bridge Piers modified and strengthened with concrete infill, encasement and brackets.
- 2 new trusses added, parallel to existing trusses.
- Roadways widened from 18 ft. to 43 ft.
- Currently: 2 – 9 ft. lanes
 No offset
- Proposed: 3 – 11 ft. lanes
 8 ft. shoulder
 2 ft. offset

Main Bridge - Cost

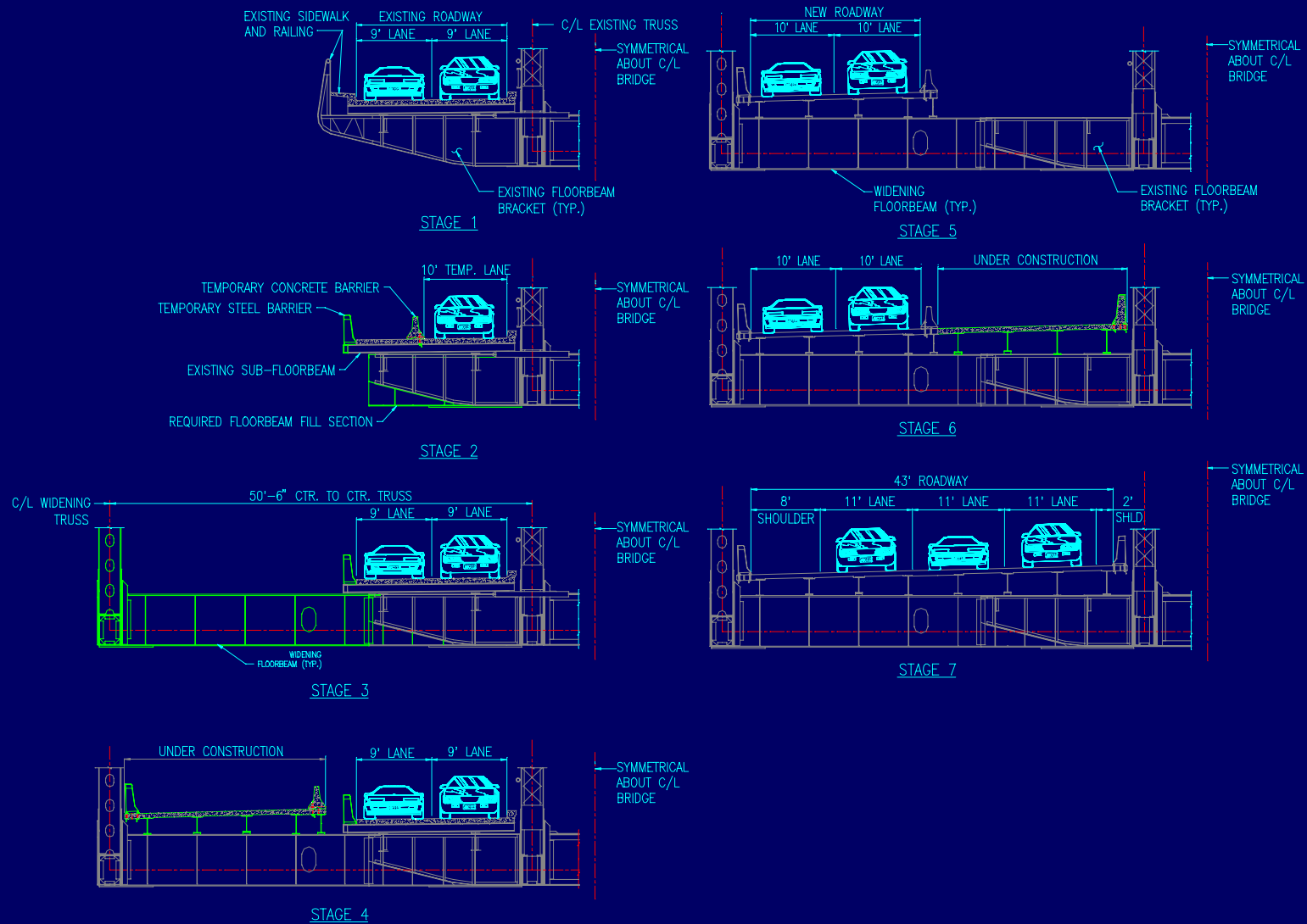
- \$ 108 Million

Maintenance of Traffic Through Construction

- Marine Traffic Maintained
 - same vertical and horizontal clearances
- Rail Traffic Maintained
- Vehicular Traffic Maintained
 - by use of staged construction

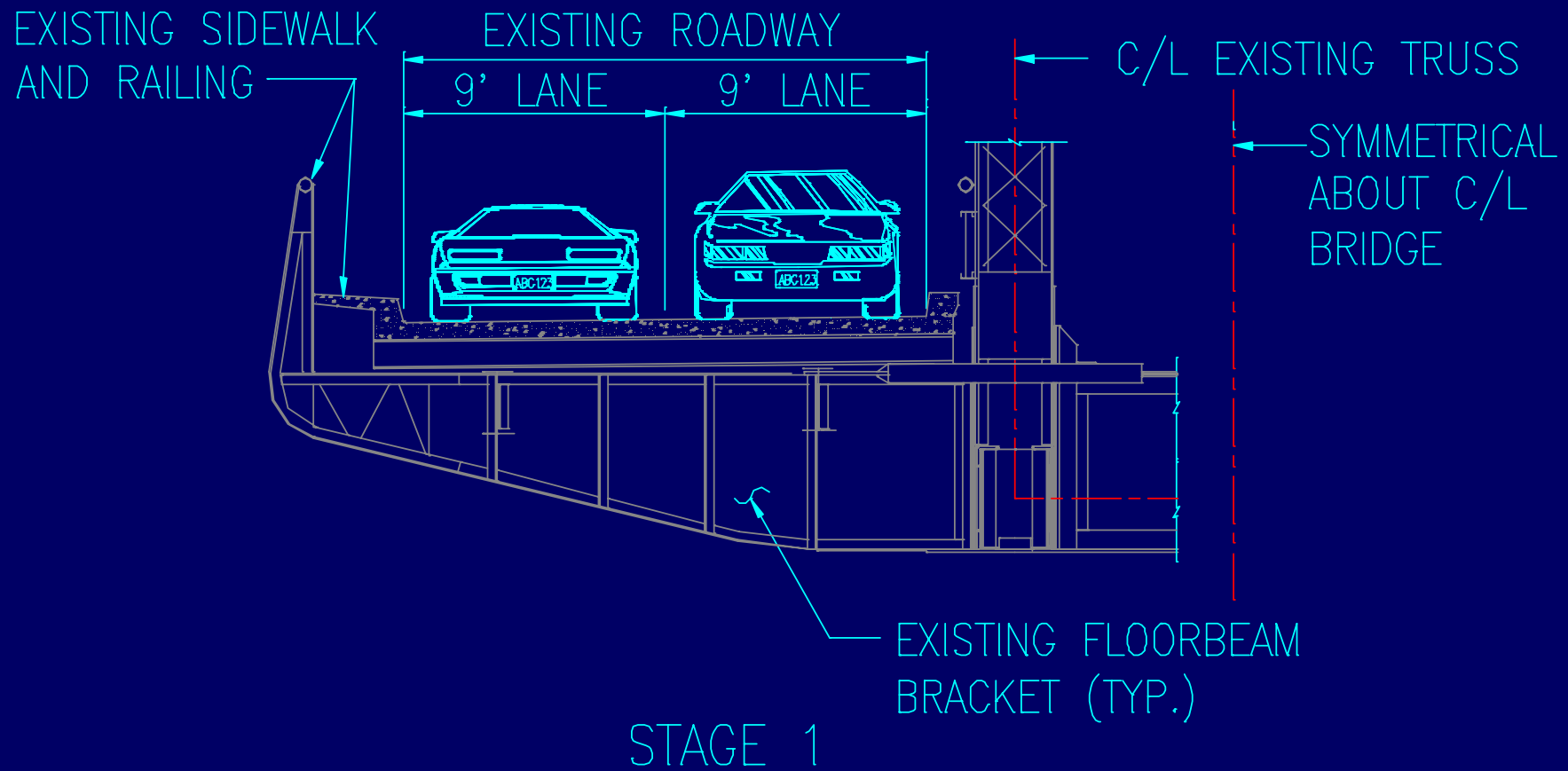
Main Bridge

Maintenance of Traffic



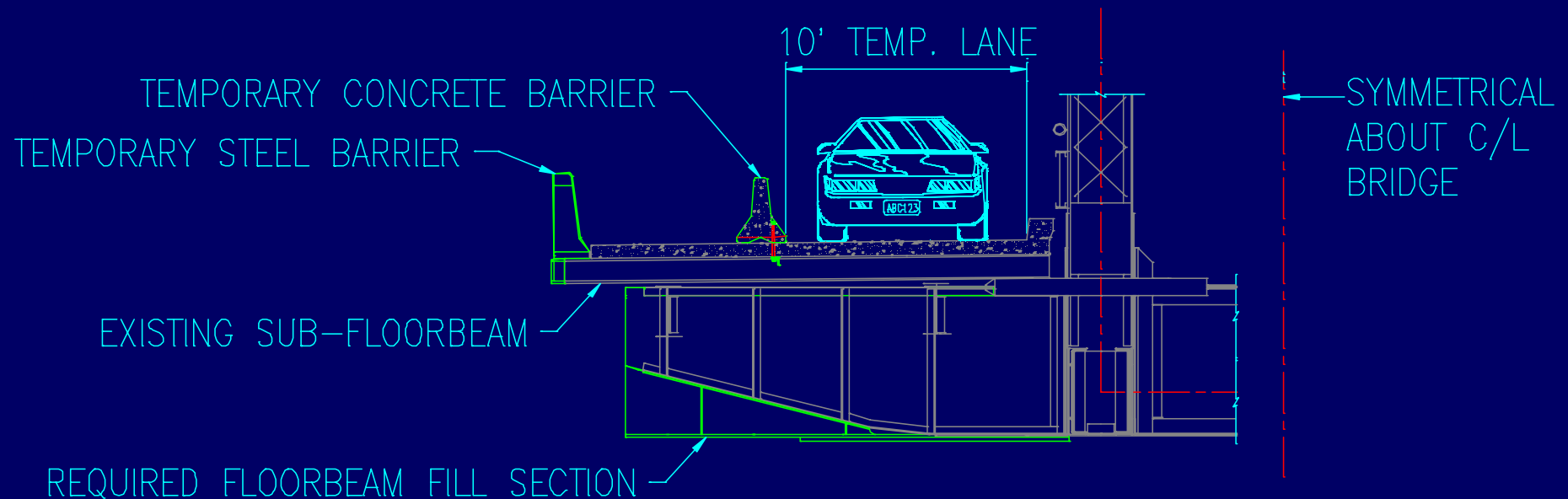
Main Bridge

Maintenance of Traffic - Stage 1



Main Bridge

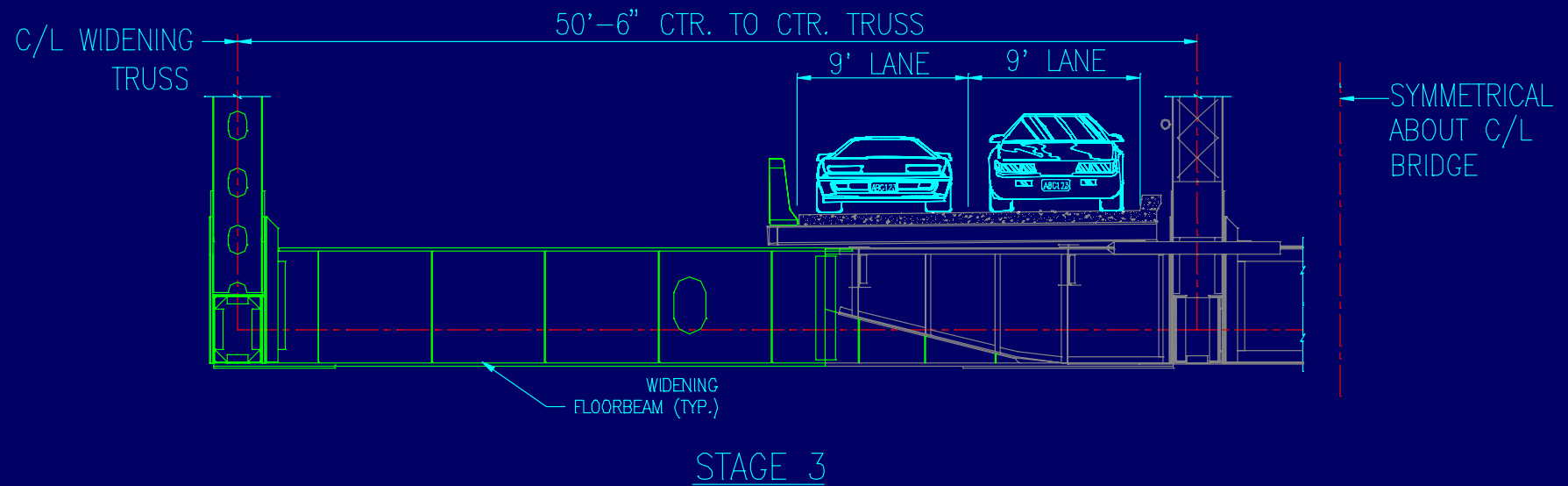
Maintenance of Traffic - Stage 2



STAGE 2

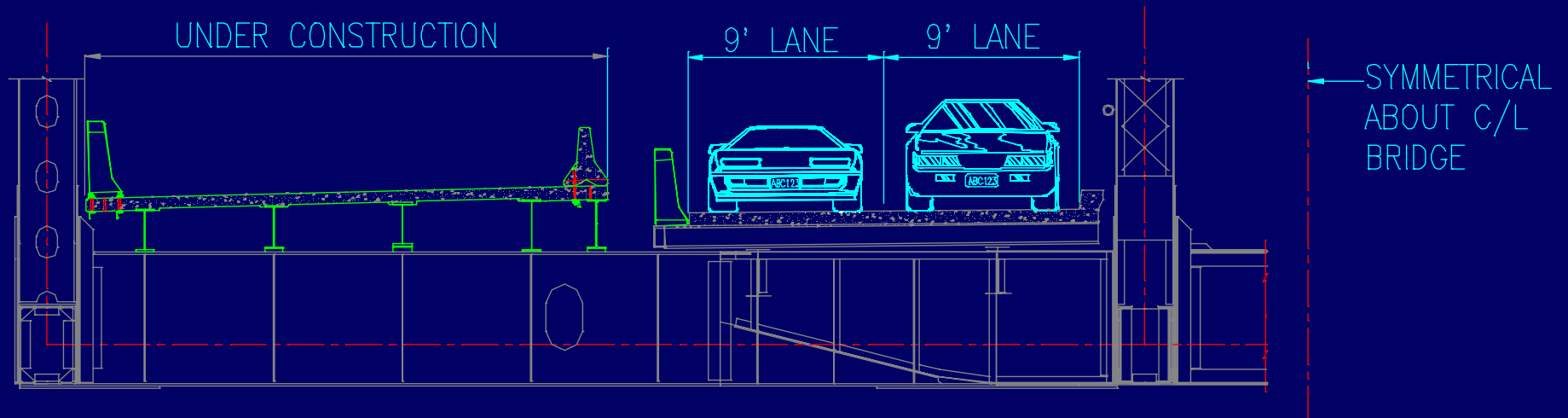
Main Bridge

Maintenance of Traffic - Stage 3



Main Bridge

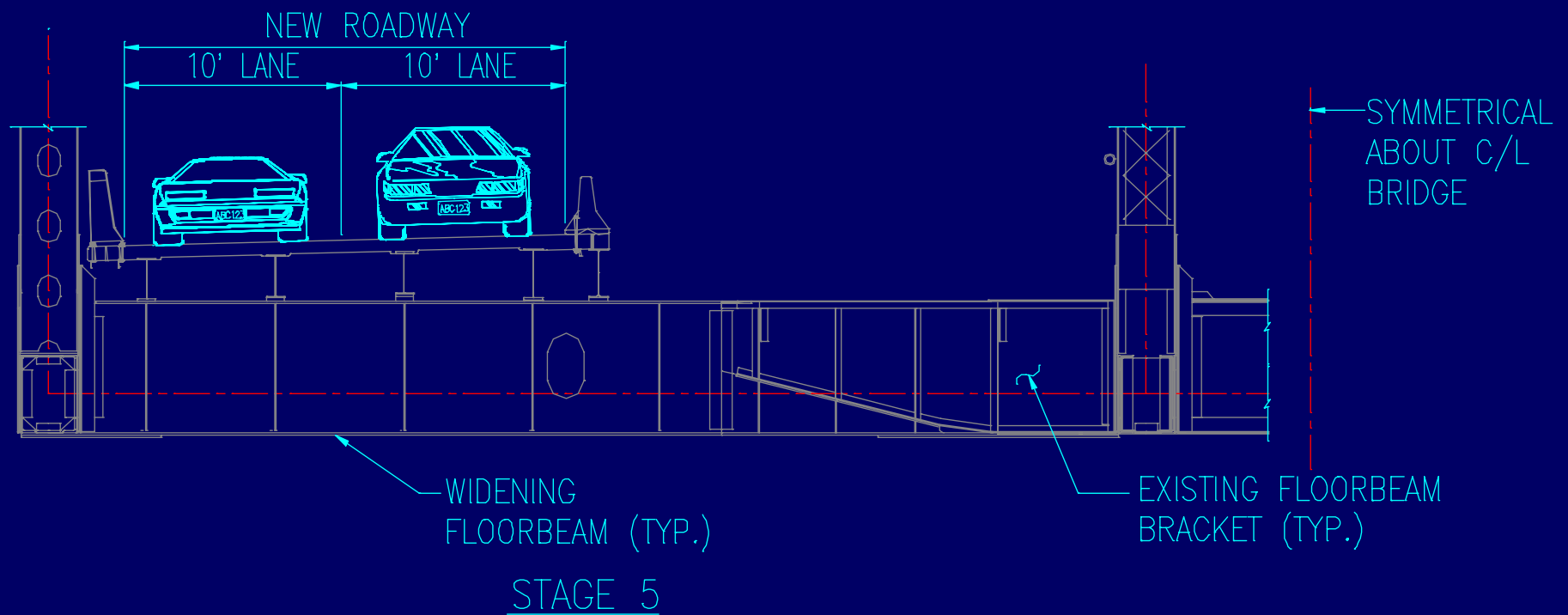
Maintenance of Traffic - Stage 4



STAGE 4

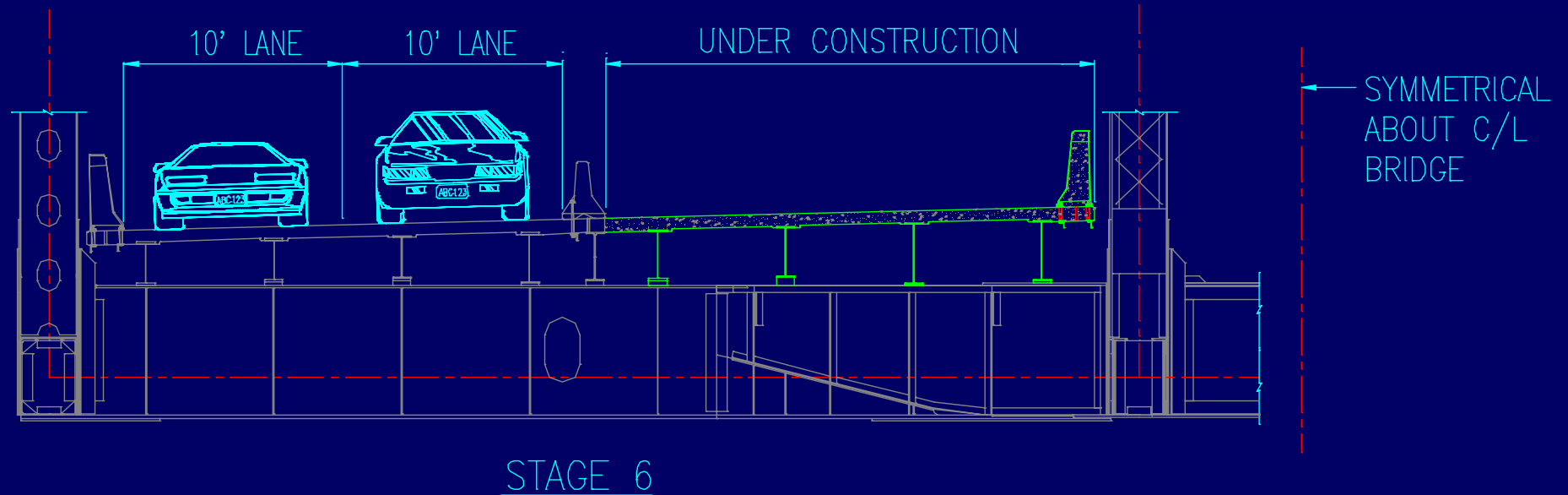
Main Bridge

Maintenance of Traffic - Stage 5



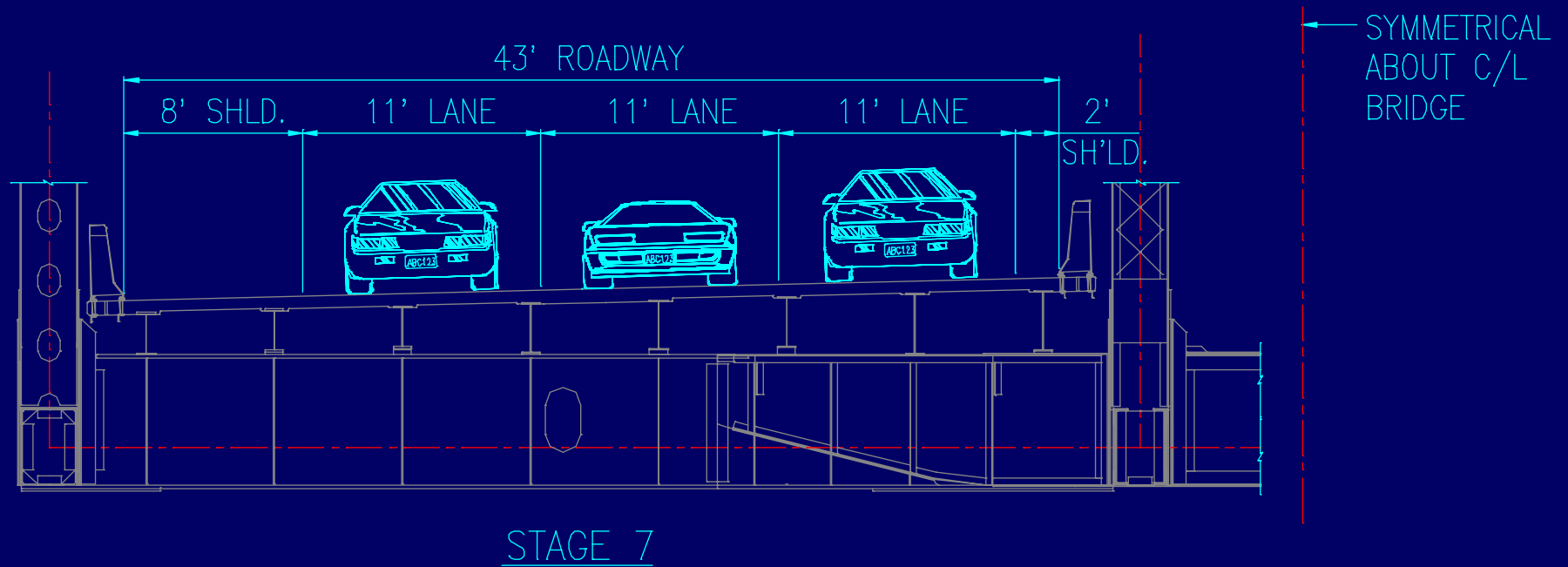
Main Bridge

Maintenance of Traffic - Stage 6



Main Bridge

Maintenance of Traffic - Stage 7



Bridge Approaches - Update

- September 2000 Public Meeting
 - Alternatives W-1 and W-2, E-1A and E-1B
- W-1 revised – to reduce costs
- W-2 dropped – too costly
- E-1A revised – to reduce costs
- E-1B dropped – did not satisfy objectives
- W-3 added

Bridge Approaches - Alternatives

- 2 Westbank Alternatives
 - W-1 and W-3
- 1 Eastbank Alternative
 - E-1A
- Do-nothing Alternative

Do-Nothing Alternative

- No new construction
- No widening of main bridge
- No elimination of traffic circles
- Status quo

Westbank Alternatives

- 3 lanes between bridge and grade separation ramps
- 2 lanes between grade separation ramps and ground level
- U.S. 90 elevated over Bridge City Ave.
- Bridge City Ave. – straight alignment, divided roadway

Alternative W-1

- End of project – before LA 18 intersection
- LA 18 Intersection – no changes
- Project footprint – wider
- Alignment – developed to accommodate potential future improvements on U.S. 90

Alternative W-3

- End of project – U. S. 90 overpass
- LA 18 Intersection – U.S. 90 divided; several additional lanes for minor traffic movements
- Project footprint – compact
- Alignment
 - streamlined
 - less private R/W required
 - Future improvements to U. S. 90 restricted at LA 18 intersection

Westbank Impacts

Alternatives	Estimated Right-of-Way (Acres)			Estimated Relocations	
	Private Acquired	Public Impacted	Railroad Impacted	Residential	Business
W-1	17.1	0.5	23.1	<div> 7 S 2 D 1 M <hr/> 10 </div>	14
W-3	6.0	1.1	33.9	1 S	14

Westbank Costs

Alternatives	Estimated Costs		
	Real Estate	Construction	Total
W-1	\$8,300,000	\$58,500,000	\$66,800,000
W-3	\$5,300,000	\$61,800,000	\$67,100,000

Eastbank Alternative E-1A

- Beginning of project on Clearview Parkway near Mounes Street
- 2 lanes from ground level to grade separation ramps
- 3 lanes from grade separation ramps to bridge
- Clearview Parkway elevated over Jefferson Highway

Eastbank Alternative E-1A (con't)

- Jefferson Highway overpasses removed
- Conventional intersection
- Provisions for future fly-over ramp
- East Corporate Drive and Mounes Street intersections still under study

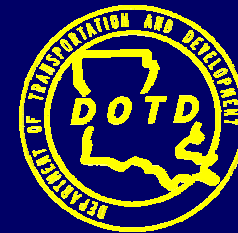
Eastbank Impacts

Alternative	Estimated Right-of-Way (Acres)			Estimated Relocations	
	Private Acquired	Public Impacted	Railroad Impacted	Residential	Business
E-1A	5.7	< 0.1	15.6	0	9

Eastbank Costs

Alternative	Estimated Costs		
	Real Estate	Construction	Total
E-1A	\$19,400,000	\$65,100,000	\$84,500,000

Huey P. Long Bridge Widening



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